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Docket No.: HT4000USNA

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**REMARKS****Part I****Rejections Based on Smith U.S. Patent No. 4,865,906**

Paragraph 7 of the Office Action sets forth a rejection of claims 1, 3-5, 11, 13-14, and 19 under 35 U.S.C. 103 based on Smith U.S. Patent No. 4,865,906 in view of Nelson et al. U.S. Patent No. 4,025,491. Paragraph 8 sets forth a rejection of claims 6-10 and 18 under 35 U.S.C. 103 based on the Smith and Nelson publications further in view of Gadoury U.S. Patent No. 5,824,614.

The Office Action on page 12 states:

The applicant asserts that oxidized polyacrylonitrile is not a modacrylic for the reasons set forth in the declaration filed on 10/19/2006. The examiner respectfully disagrees. Firstly, it is noted that page 3 of the declaration ends with an incomplete sentence, therefore, the declaration is not completely comprehensible.

In answer, the incomplete sentence is regretted. The complete sentence should have read, "This process is called carbonization and leaves a fiber composed of long, tightly inter-locked chains of carbon atoms with only a few non-carbon atoms present."

However for purposes of continued prosecution, the incomplete sentence can be ignored.

The Office Action continues opposite the Declaration Under 37 C.F.R. 1.132 of Dr. Reiyao Zhu:

Secondly, the declaration incorrectly assumes that a conventional dictionary definition defines "modacrylic fiber" as used in the current claims. The specification clearly states, "By modacrylic fibers is meant acrylic synthetic fiber made from a polymer comprising primarily acrylonitrile." (See page 3, lines 14 and 15 of the current specification) MPEP 2111.01 III states:

"Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999)."

The examiner cites U.S. Patent No. 4,970,111 to Smith, Jr. (see column 3, lines 49-68) as evidence that, according to the definition set forth in the current specification, oxidized polyacrylonitrile is a modacrylic.

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In reply the definition in the specification requires, "By modacrylic fibers is meant **acrylic synthetic fiber.**" (emphasis added) Oxidized polyacrylonitrile is not an "acrylic."

The Declaration of Dr. Zhu goes into detail in the process of making carbon fibers from polyacrylonitrile with a section of "Raw Materials" (which includes carbon fibers made from polyacrylonitrile) on Manufacturing" including "Process," "Spinning," "Stabilizing," "Carbonizing," "Treating the Surface," and "Sizing."

Since Dr. Zhu's education and work experience is directed to textile chemistry, she is qualified to set forth the conclusion in the Declaration, namely:

That I state in summary Smith, Jr. USP 4,865,906 has no relevance to my patent application since oxidized polyacrylonitrile fiber is chemically different from modacrylic fiber.

Accordingly "oxidized polyacrylonitrile fiber is not "acrylic synthetic fiber." A definition is set forth in the present specification which definition is likewise quoted in the Office Action. It is respectfully submitted an incorrect Office interpretation is present since "oxidized polyacrylonitrile fiber" represents "carbon fiber."

## Part II

### **Rejection Based on Campbell et al. U.S. Patent No. 6,787,228**

Paragraphs 3-6 of this Office Action set forth rejections which include all claims under prosecution under 35 U.S.C. 103 based in Campbell et al. U.S. Patent No. 6,787,228 in combination with one or more publications.

It is considered the issues opposite Campbell et al. with the publications have crystallized with application by the Office not only in the present request for continued examination but also in an earlier Final Office Action dated June 27, 2006.

Therefore an appeal of the Office position is considered proper at this time.

## Summary

In summary, the present response is filed for the purpose of simplifying issues in the present patent application to remove all rejections based on Smith U.S. Patent No. 4,865,906.

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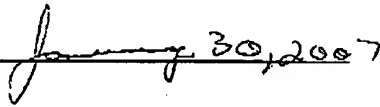
Entry of the present response is requested.

Respectfully submitted,



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Dated: \_\_\_\_\_



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